

Abstract

An elongated robotic member that is simple in design and structure, relatively inexpensive and consumes little power. In one illustrative embodiment, one or more linear actuators are used in conjunction with two or more plates that are fixed at spaced locations along a spine member. Fixed between each pair of plates is one or more actuators, which when activated, pull or push corresponding portions of the plates towards or away from each other. This changes the relative orientation of the plate pairs, thus providing a bending movement. The spine preferably is flexible at least in the lateral direction, and bends in response to the relative movement of the plates. A number of plate pairs may be provided to create an arbitrarily long robotic member.